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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,952	04/08/2004	David C. Collins	200400670-1	9712

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HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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MOTSINGER, SEAN T

ART UNIT	PAPER NUMBER
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2624

NOTIFICATION DATE	DELIVERY MODE
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07/23/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM  
ipa.mail@hp.com  
jessica.l.fusek@hp.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/820,952	COLLINS, DAVID C.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SEAN MOTSINGER	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,9-20,22-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20,22-25 and 27-30 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7,9,10,12,15,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 3,4,11,13,14,16 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Applicants Arguments/Amendments***

Applicants Arguments/Amendments filed on 4/27/2009 have been entered and made of record.

Applicants arguments with respect to 35 U.S.C. 101 have been fully considered and the amendments have over come the rejection.

Applicants arguments with respect to 35 U.S.C. 103 have been fully considered and applicants amendments overcome the rejections.

Applicants arguments with respect to double patenting have been fully considered and are persuasive except for copending application 10/821,130. This application has claims which remain not patentable distinct, from the present application. Indication of subject matter to be allowable over the prior art does not affect the double patenting rejection of an application which is not prior art.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

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1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 5, 7, 9, 10, 12, 15, 17, 19, are provisionally rejected on the ground of nonstatutory double patenting over claims 1, 8, 7, 2, 4, 9, 11, 17, and 19 of copending Application No. 10/821130 in view of "Super-Resolution Composition in Multi-Projector Displays" by Jaynes et al. ("Jaynes"). This is a provisional double patenting rejection since the conflicting claims have not yet been patented. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of this application recites

A method of displaying an image with a display device, the method comprising:  
receiving image data for the image;

generating first and second sub-frames, wherein the first and the second sub-frames comprise a plurality of sub-frame pixel values and a plurality of error values, and wherein at least a first one of the plurality of sub-frame pixel values is calculated using the image data, at least a second one of the plurality of sub-frame pixel values, and at least one of the plurality of error values;

and alternating between displaying the first sub-frame including displaying the first one of the plurality of sub-frame pixel values in a first position and the second sub-frame including displaying the second one of the plurality of sub-frame pixel values in a second position spatially offset from the first position with the display device

wherein a region of influence associated with the first one of the plurality of sub-frame pixel values comprises a number of pixel values that corresponds to a number of iterations used to generate the first and second sub frames.

Claim 1 of the copending application recites

A method of displaying an image with a display device, the method comprising:  
receiving image data for the image with an image processing unit;  
generating first and second sub-frames to include first and second sub-frame pixel values respectively, wherein the first sub-frame pixel value is calculated using the image data and at least a second one of the plurality of sub-frame pixel values with the image processing unit;  
and alternating between displaying the first sub-frame including displaying the first sub-frame pixel values in a first position with the display device and the second sub-frame including displaying the second one of the plurality of sub-frame pixel values in a second position spatially offset from the first position with the display device  
wherein a region of influence associated with the first one sub-frame pixel values comprises a number of pixel values that corresponds to a number of iterations used to generate the first and second sub frames.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify claim 1 of the copending application to include the plurality of error values and display the sub-frames using error values as taught by the disclosure of the copending application and as taught by Jaynes who shows in figure 4 that a sub-frame pixel value of a first sub-frame a depends on the pixel value of a second sub-frame pixel value b, and an unbiased error metric is used to converge the sub-images as discussed in equation 7.

Claim 2 corresponds to the additional stipulations in claim 8

Claim 5 corresponds to the additional stipulations in claim 7

Claim 7 corresponds to the additional stipulations in claim 2

Claim 9 corresponds to the additional stipulations in claim 4

Claim 10 corresponds to the additional stipulations in claim 9

Claim 12 corresponds to the stipulations of claim 11 in application 10/821130 this claim differs from claim 11 in that it lacks the “error values” similar to claim 1 and therefore is rejected in view of Jayne’s for similar reasons as claim 1.

Claim 15 corresponds to the additional limitations of claim 17

Claim 17 corresponds to the additional limitations of claim 19

For claim 19 Jayne’s further discloses wherein the image comprises a first plurality of pixels at a first resolution, and wherein the first and the second sub-frames comprise a second plurality of pixels at a second resolution less than the first resolution (see abstract).

***Allowable Subject Matter***

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Claims 3,4,11,13,14,16,18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 20, 22-25, 27-30 are allowable.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN MOTSINGER whose telephone number is (571)270-1237. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Bhavesh M Mehta/

Supervisory Patent Examiner, Art Unit 2624

Motsinger

7/17/2009